FACT SHEET

Advance Notice of Proposed Rulemaking:
Emissions Standards for Stationary Diesel Engines

ACTION

- On January 16, 2008, the Environmental Protection Agency (EPA) released an Advance Notice of Proposed Rulemaking (ANPR) inviting comment on several issues regarding options for regulating emissions of pollutants from existing stationary diesel engines.

- Over the past several years, EPA has taken several actions to reduce exhaust pollutants from mobile and stationary diesel engines, and the Agency continues to be interested in exploring opportunities to further reduce exhaust pollutants from stationary diesel engines, particularly existing stationary diesel engines that have not been subject to federal standards.

- EPA is particularly interested in addressing emissions from larger (300 horsepower or greater), older (manufactured prior to 1996) existing stationary diesel engines as they represent the majority of particle and toxics emissions from all non-emergency stationary engines.

- The ANPR is not a proposed rulemaking. This ANPR is intended to explore possible options to achieve further emissions reductions, particularly from existing stationary diesel engines.

    - Specifically, the purposes of this ANPR are to present information currently available to the Agency on existing stationary diesel engines and to solicit data and comments on several issues necessary to determine an approach to developing emission standards for these sources.

    - The specific areas for which EPA is seeking comment include:
        - Locations of stationary diesel engines;
        - Usage and duty cycles;
        - Which stationary diesel engines to control;
        - Appropriate controls for those engines;
        - Existing stationary engine control measures in place;
        - Costs and cost effectiveness of, and emission reductions associated with, different control technologies and control strategies; and
        - Monitoring, recordkeeping and reporting requirements of owners and operators to ensure compliance with any emission standards.

- EPA will accept public comment on the ANPR for 30 days following publication in the *Federal Register.*

- EPA will consider comments and information received from the public on this ANPR in

developing the Agency's proposed approach to regulating emissions from existing stationary diesel engines.

- EPA will propose regulations regarding existing stationary diesel engines no later than February 25, 2009 and take final action by February 10, 2010.

BACKGROUND

- The mixture of chemicals in diesel engine exhaust can vary in important ways, particularly when comparing exhaust from uncontrolled engines to exhaust from controlled engines

- Pollutants that are emitted from diesel engines have been associated with several health-related concerns, including cancer, respiratory problems, and premature death.

    - Diesel emissions contribute to outdoor concentrations of numerous hazardous air pollutants each of which is known, or suspected to have cancer and/or noncancer effects.
    - EPA has determined that exposure to diesel exhaust is likely to be carcinogenic to humans and is associated with numerous noncancer effects.
    - Exposure to fine particulate matter (PM) in diesel exhaust is associated with premature mortality, aggravation of respiratory and cardiovascular disease, changes in lung function and increased respiratory symptoms.
    - Diesel exhaust also includes nitrogen oxides (NO_x) and volatile organic compounds, which react in the presence of sunlight to form ground-level ozone, exposure to which is associated with a wide array of human health effects. These include aggravation of respiratory disease, changes in lung function and increased respiratory symptoms, altered respiratory defense mechanisms, and chronic bronchitis.

- Over the last decade, EPA has promulgated several rules that will greatly reduce emissions from new stationary and mobile diesel engines:

    - **2004 MACT Standards for New Stationary Diesel Engines** –This rule requires new stationary diesel engines greater than 500 hp to meet national emission standards for hazardous air pollutants. The rule is projected to reduce total national air toxic emissions by an estimated 5,600 tons per year (tpy) in the 5th year after the rule is promulgated. EPA projected that the installation of diesel oxidation catalysts through this rule would also reduce PM emissions from the affected engines by 20-30%.

    - **2006 New Source Performance Standards for Stationary Diesel Engines** – Non-emergency diesel engines will be required to meet Tier 4 emission levels, which will represent a reduction of over 90% NOx and PM compared to unregulated levels. Emergency diesel engines will be required to meet Tier 3 emission levels that will also result in significant reductions of NOx and PM. SO2 reductions will be achieved by requiring the use of ultra-low sulfur (15 ppm) diesel fuel by 2010. By 2015 this

NSPS will help reduce NOx emissions by 38,000 tpy, sulfur dioxide will be reduced by 9,000 tpy and PM by 3,000 tpy.

- **On-Road Heavy Duty Diesel Rule –** EPA has had standards effective for on-road diesel engines since the 1970 model year. The most recent standards were promulgated in 2001. This rule results in substantial control (about 98% compared to pre-control engines) for heavy-duty diesel trucks for PM and NOx. Also, this rule required ultra low sulfur diesel fuel in late 2006. The PM standard was effective for the 2007 model year and has resulted in the use of diesel particulate filters, a new technology resulting in large PM reductions. The stringent NOx standard is effective for the 2010 model year. By 2020, these regulations will result in PM, NOx, and SOx reductions of 82,000, 1,820,000, and 126,000 tons/year, respectively. These regulations will also result in reductions of mobile source air toxics such as benzene, formaldehyde, acetaldehyde, and 1, 3-butadiene.

- **2004 Non-Road Heavy Duty Diesel Rule** – This rule will result in substantial emission controls for nonroad diesel engines such as those used in the construction and agricultural industry. Both PM and NOx are significantly controlled along with a requirement for ultra low sulfur diesel fuel. These standards begin phasing in 2008. By 2020, this rule will result in an annual PM, NOx, and SO2 reduction of 86,000, 444,000, and 323,000 tons, respectively. These regulations will also reduce emissions of air toxics such as benzene, formaldehyde, acetaldehyde, and 1, 3-butadiene.

- **Final Air Toxics Standards For Reciprocating Internal Combustion Engines Action --** On December 20, 2007, EPA issued a rule that will reduce emissions of criteria and air toxic pollutants from stationary internal combustion engines. These engines are used at facilities such as power plants and chemical and manufacturing plants to generate electricity and power pumps and compressors. They are also used in emergencies to produce electricity and pump water for flood and fire control. The technology-based air toxics standards will limit air toxics emissions from new and reconstructed stationary reciprocating internal combustion engines that either are located at smaller-emitting sources of air toxics emissions called areas sources, or that have a site rating of less than or equal to 500 horsepower and are located at larger emitting, or major sources of air toxics emissions.

- Some stakeholders are encouraging the Agency to review whether there are further ways to reduce emissions of pollutants from existing stationary diesel engines.

- As a result of discussions with stakeholders, EPA is undertaking this ANPR.

HOW TO COMMENT

- Comments should be identified by the following Docket ID Number: EPA-HQ-OAR-2007-0995.

- Comments should be submitted by one of the following methods:

  - Federal eRulemaking Portal (www.regulations.gov: Follow the on-line instructions for submitting comments).
  - Email: a-and-r-Docket@epa.gov.
  - Fax: (202) 566-9744.
  - Mail: U.S. Postal Service, send comments to: Emissions Standards for Stationary Diesel Engines Docket, Environmental Protection Agency, Air and Radiation Docket and Information Center, Mailcode: 2822T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Please include a total of two copies. We request that a separate copy also be sent to the contact person identified below (see FOR FURTHER INFORMATION CONTACT).
  - Hand Delivery: In person or by courier, deliver comments to: EPA Docket and Information Center, Public Reading Room, EPA West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

FOR MORE INFORMATION

- To download the ANPR on EPA's website, go to "Recent Additions" at the following address: http://www.epa.gov/ttn/oarpg/.

- Further information on this action and other background information are also available either electronically in www.regulations.gov, EPA's electronic public docket and comment system, or in hard copy at the EPA Docket Center, Environmental Protection Agency, Room 3334, 1301 Constitution Avenue, NW, Washington, DC (See specific Docket ID number above). The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

- For further information about this action, contact Chris Stoneman of the EPA's Office of Air Quality Planning and Standards by phone 919/541-0823 or by e-mail at stoneman.chris@epa.gov.